



THIRD ANNUAL MEKONG FLOOD FORUM

7-8 April 2005, Vientiane



MRC Hydro-Meteorological Network Improvement



MRC Hydro-Met Network Improvement

- **Real time data is particularly useful for flood forecasting and early warning.**
- **Improvement of Network with automatic equipment and capacity building**

1. Appropriate Hydrological Network Improvement (AHNIP)

- ✓ **Funded by Australian Government**
- ✓ Improve 18 stations along mainstream.
- ✓ Duration: 5 years (April 2001 - March 2006)

2. Mekong Hydrological Cycle Observing System (Mekong HYCOS)

- ✓ **Funded by French Government**
- ✓ Improve about 50 stations on main tributaries
- ✓ Duration: 5 years (January 2006 - December 2010)



AHNIP Project

Goal:

To facilitate the sustainable development, utilization and conservation of water and related resources in the Mekong Basin

Purpose:

To improve the water level monitoring and data handling capacities of the MRC member country and China

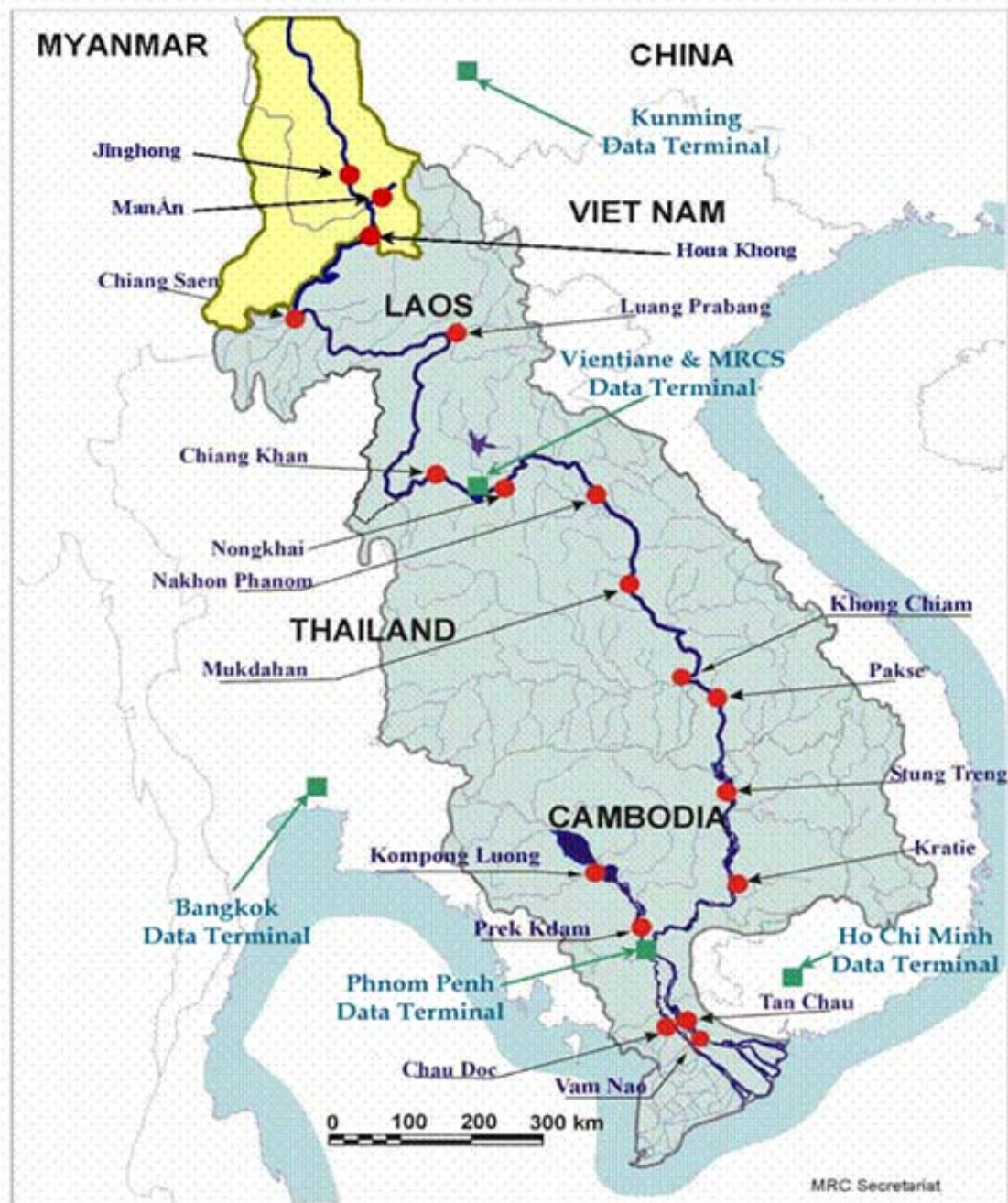


AHNIP Project

Primary Output:

- ✓ **To improve 18 hydrological stations along the Lancang/Mekong River.**
- ✓ **To establish 6 Data Terminals**
- ✓ **To strengthen capacity in managing, operating and maintaining the Network and sharing data**

County	Number of station	Data Terminal
Cambodi	4	Phnom Penh
Lao	3	Vientiane
Thailand	6	Bangkok
Viet Nam	3	Ho Chi Minh
China	2	Kunming
		MRCs
Total	18	6

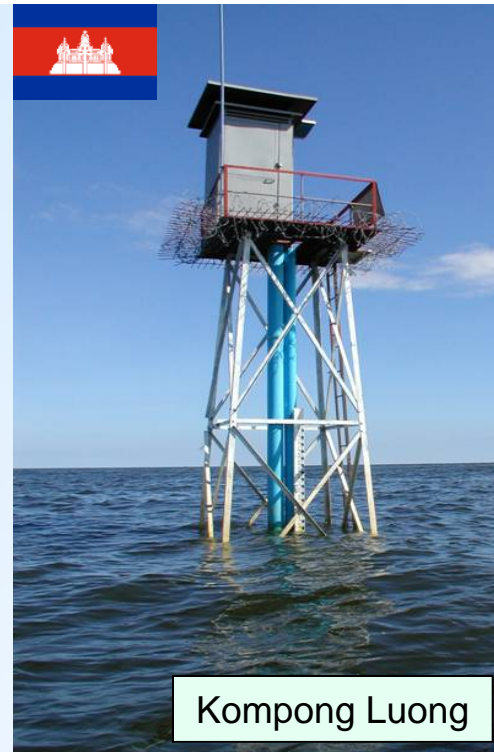


APPROPRIATE HYDROLOGICAL NETWORK IMPROVEMENT PROJECT

EQUIPMENT



Installed at 13/18 stations



Kompong Luong



Pakse



Chiang Khan



Tan Chau

EQUIPMENT



Installed at 2/18 stations



Nong Khai



Prek Kdam

EQUIPMENT

设备的技术指标符合要求。
7、不得私自更改设备的工作
无线电通信保密，遵守无线电管理规定，
无关的事。
8、不得使用核定以外的调制和传输方式进
行工作。



Installed at 2/18 stations

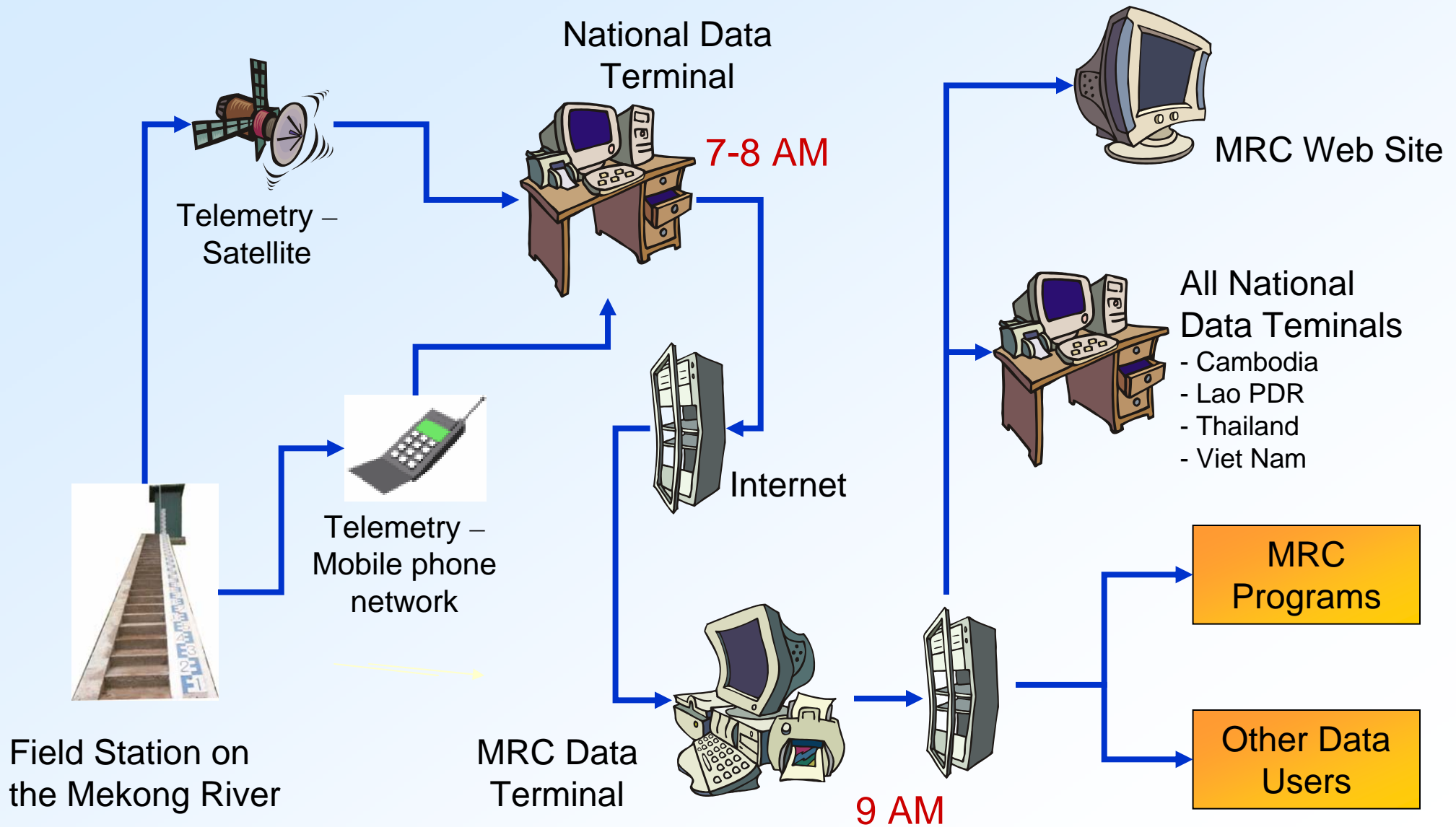


Jinghong

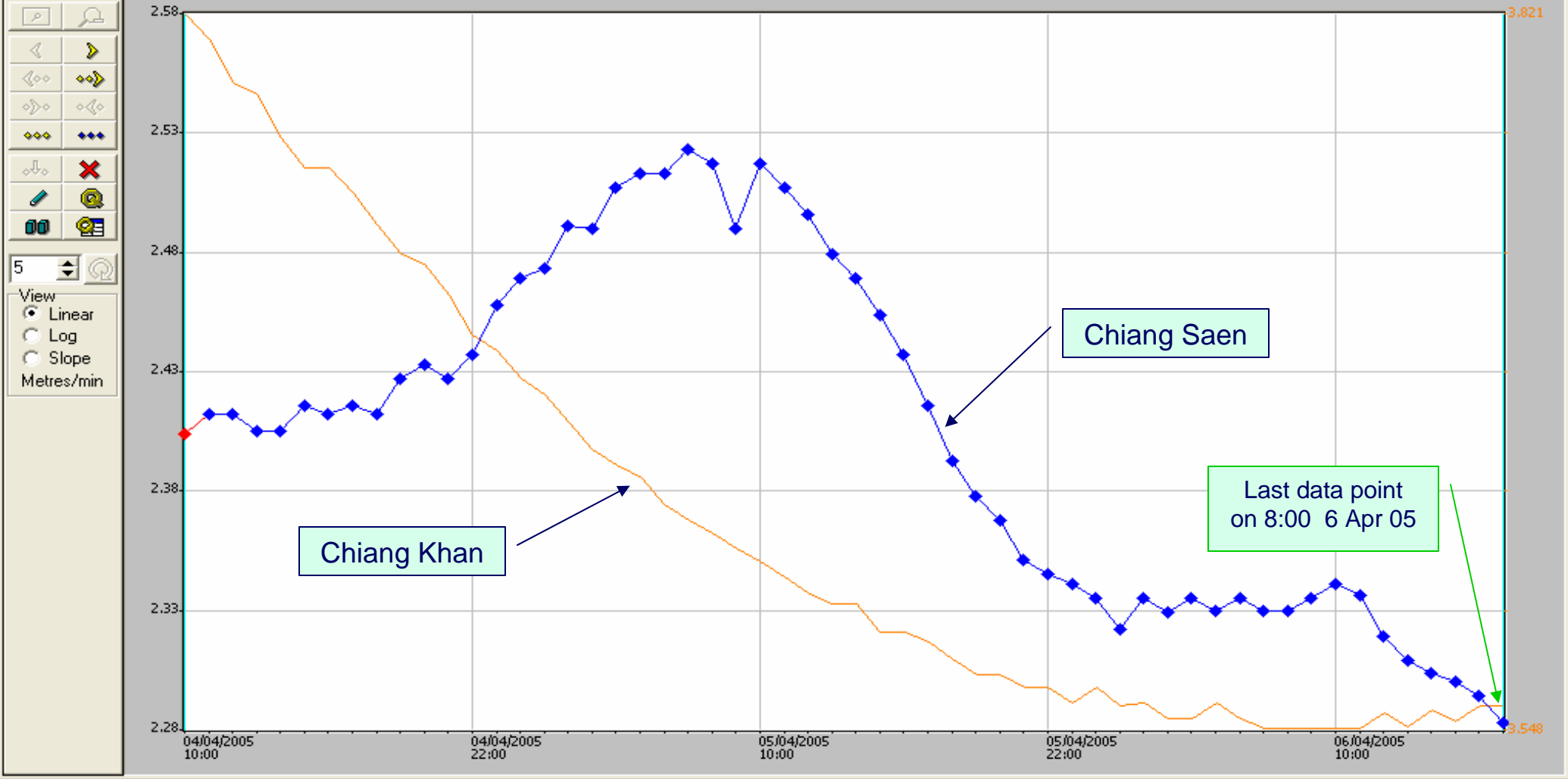


Man'An

Regional Data Flow - AHNIP



Telemetry data from Chiang Saen, Chiang Khan stations on 4-6 April 2005



5

View

- Linear
- Log
- Slope

Metres/min



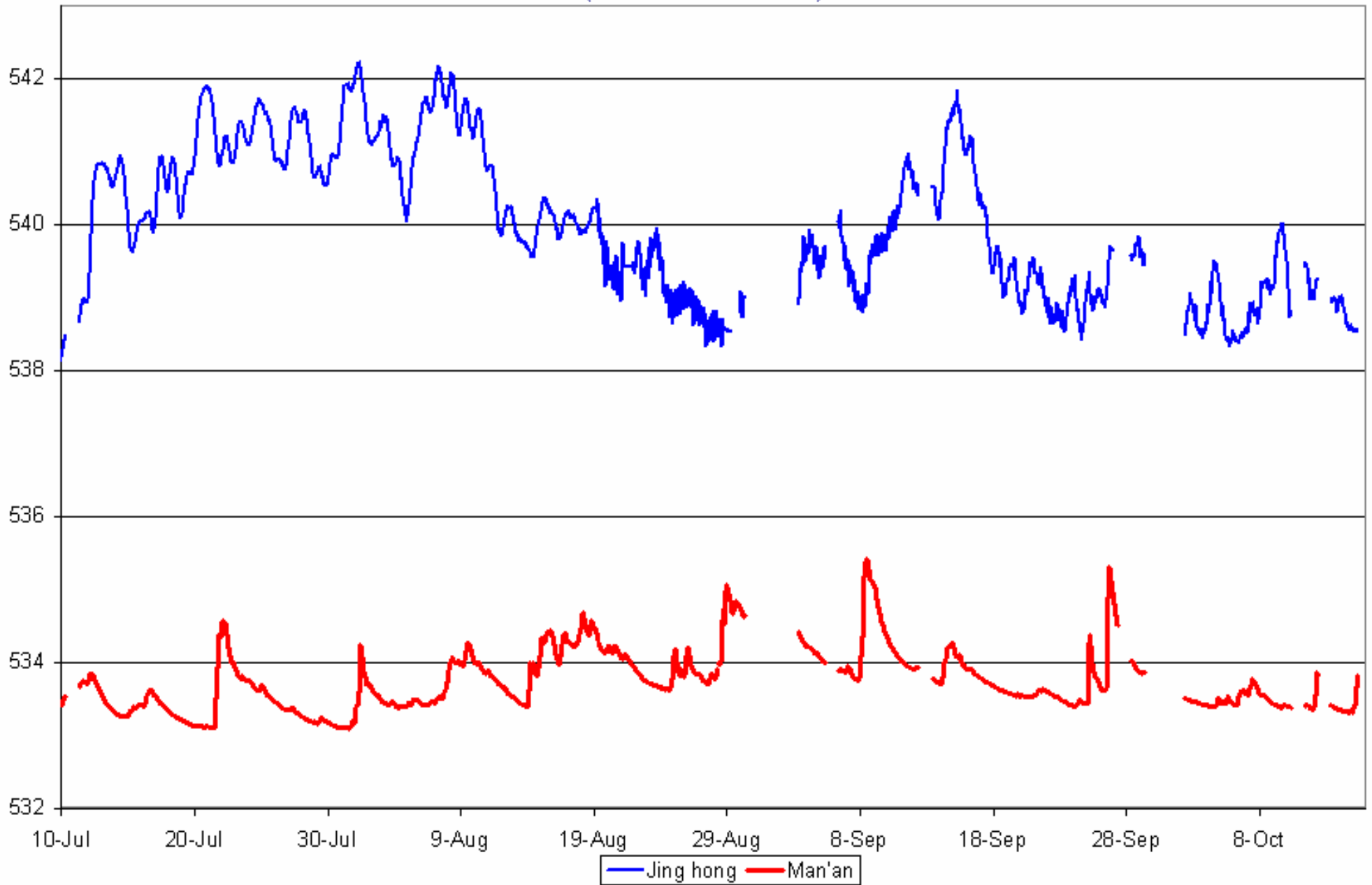
Cooperation with China

- **The Agreement (April 2002) and Implementation Plan (March 2003) on Provision of Hydrological Information of the Lancang/Mekong River in flood season.**
- **Install automatic equipment at Jinghong and Man'an**
- **Establish Data Terminal at Kunming**
- **In flood season 2004, China provided real time water level data & rainfall to MRCS very morning from 15 June to 15 October**
- **Continue the Implementation Plan**

TELEMETRY HOURLY WATER DATA in CHINA in 2004

(From 10Jun - 15Oct)

H (m)





Mekong- HYCOS Project

- The Mekong-HYCOS project is a contribution of the French government to the MRC FMMP.
- The Mekong-HYCOS project will establish a near-real time basin wide hydro-met information system, which spatially covers main tributaries of the Mekong in the member countries.
- The Mekong-HYCOS system will be integrated into the existing MRC monitoring system, while improving the national hydrological networks and river monitoring/ forecasting capacities.



Mekong-HYCOS Project

Development goal

➤ To minimize the loss of lives and property by reducing flood vulnerability in the Mekong River Basin, through strengthening integrated water resources management in the context of transboundary river basin management.

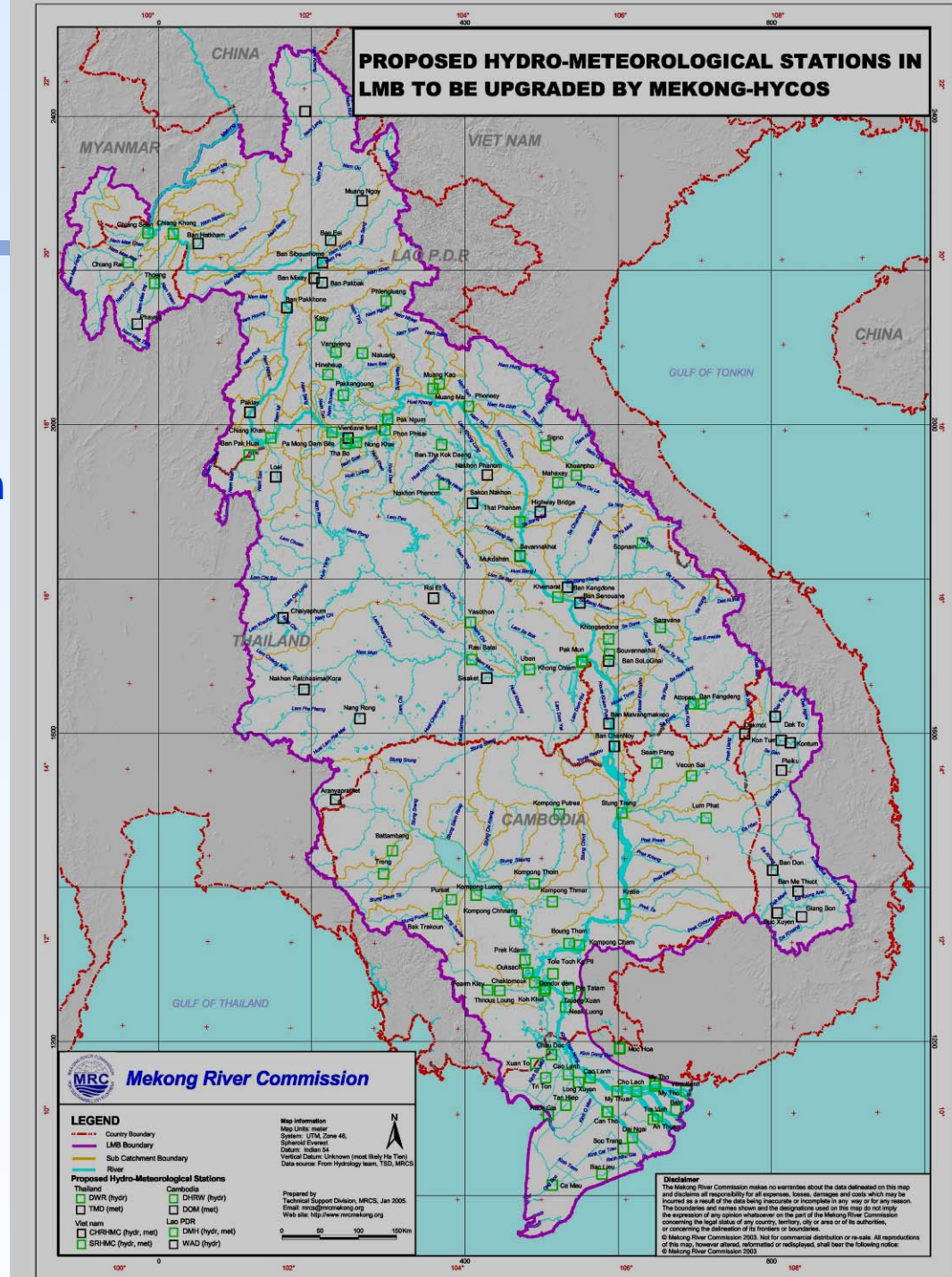
Specific objective:

➤ To establish a well functioning, reliable and accurate real time hydro-meteorological data collection and transmission system at basin level.



Map of proposed Hydro-Met stations in Lower Mekong Basin to be upgraded by Mekong-HYCOS

Proposed 50 stations mainly cover main tributaries





Three Principles on Real-Time Data Management and Dissemination System

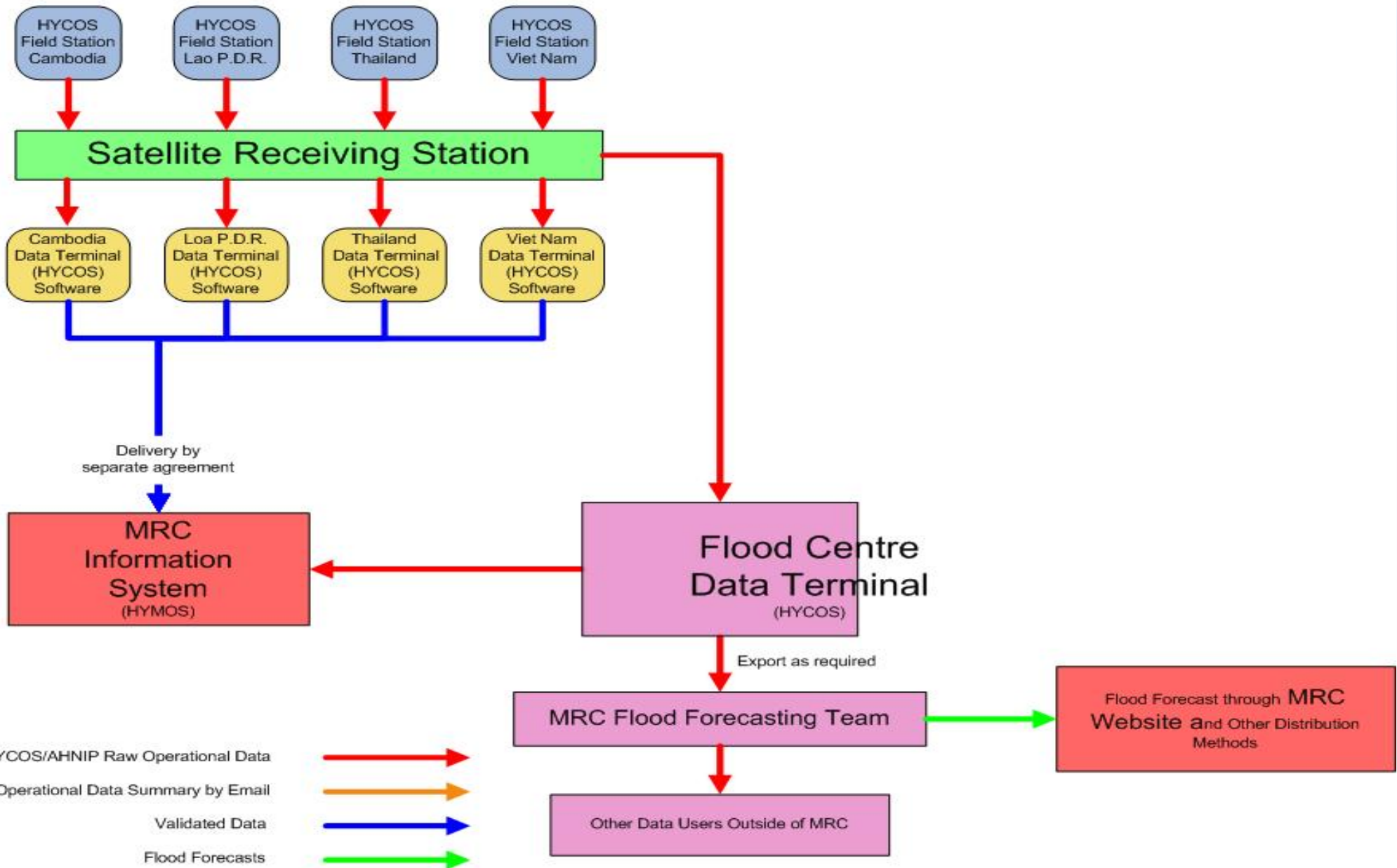
- 1. Equal & Simultaneous access to ALL RAW data for the concerned Participating Country/ Line Agencies and Regional Flood Management and Mitigation Centre (RFMMC)**
- 2. No Dissemination of Any RAW Operational Data from RFMMC to outside communities**
- 3. Concerned National Line Agencies are responsible for validation of their respective RAW data and provision to MRC for the publication (e.g. Hydrological Yearbook)**



Mekong-HYCOS Management

- The project will be managed centrally by MRC in cooperation with WMO and ensure that all data collected basin wide are securely available in real-time at the RFMMC
- Each country will be responsible for the operation and maintenance of its part of the system with the support and co-ordination of the MRC.
- The member countries are responsible for flood forecasting within their own territory and obliged to share relevant data and information in the framework of Mekong-HYCOS

HYCOS Data Flow



HYCOS/AHNIP Raw Operational Data



Operational Data Summary by Email



Validated Data



Flood Forecasts





MRC Hydro-Met Network Improvement

SUMMARY

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*Thank you very much
for your attention.*